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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,427	03/06/2001	Yoshinobu Komatsu	SPO-590	1329
7590 10/22/2003 Sherman & Shalloway 413 North Washington Street Alexandria, VA 22314			EXAMINER LANGEL, WAYNE A	
			ART UNIT 1754	PAPER NUMBER

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

786427

Applicant(s)

Igarashi et al

Examiner

Langel

Group Art Unit

1754

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 9-8-83

☒ This action is **FINAL**.

- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1, 11, 17, 24, 31-33, 38, 40, 41 and 43 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 11, 17, 24, 31-33, 38, 40, 41 and 43 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

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The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 11, 17, 24, 31-33, 38, 40, 41 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Woltermann. Woltermann is relied upon as discussed in the last Office action. It would be prima facie obvious to employ sulfate as the anion in the composition of Woltermann. Applicant's argument, that Woltermann does not provide any suggestion or motivation to combine zinc and magnesium and further fails to teach that an anion A is sulfuric acid, is not convincing, since applicant's claims do not require the presence of magnesium. In any event, Woltermann discloses in the sentence bridging columns 1 and 2 that the composition may contain magnesium as a divalent metal, and discloses at column 2, lines 6-11 that the anion in the composition may be sulfate. Applicant's argument, that even assuming arguendo that a prima facie case has been established, applicant rebuts the presumption with evidence of unexpected results in that the claimed composition unexpectedly provides a

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completely new crystalline structure exhibiting single X-ray diffraction peaks in a region where 2θ is 33 to 50° and in a region where 2θ is 60 to 64°, is not convincing, since applicant has not provided evidence showing that such X-ray diffraction peaks would be "unexpected". There is no evidence on record showing that the process disclosed by Woltermann would not also provide a composition having the crystalline structure as recited in applicant's claims. Obviousness would not require predictability as to the type of crystalline structure which would be exhibited by the compositions produced according to the process of Woltermann. It is only necessary that Woltermann fairly suggest doing what applicant has done, and Woltermann clearly suggests substituting a sulfate ion for the nitrate ions exemplified in Examples 1-4, since Woltermann establishes the equivalence between nitrate and sulfate ions at column 2, line 7.

Claims 1, 11, 17, 24, 31-33, 38, 40, 41 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bhattacharyya. It would be prima facie obvious to employ sulfate as the anion for the composition of Bhattacharyya. Applicant's argument, that nothing in Bhattacharyya teaches or suggests that zinc and magnesium are contained as divalent metals, is not convincing, since applicant's claims do not require that magnesium be present. In any event, Bhattacharyya teaches at

column 4, lines 20 and 21 that magnesium may function to control the acidity or basicity of the catalyst, accordingly the resulting composition would contain magnesium. Bhattacharyya further discloses at column 4, lines 25-31 that the anion in the composition may be sulfate. Applicant's argument, that Bhattacharyya fails to teach that a polybasic salt undergoing claimed process conditions exhibit a single X-ray diffraction in the region where 2θ equals 33 to 50°, is not convincing, since obviousness would not require predictability as to the type of crystalline structure which would be exhibited by the compositions formed according to the process of Bhattacharyya. It is only necessary that Bhattacharyya fairly suggest doing what applicant has done, and Bhattacharyya suggests the process recited in applicant's claim 11 in Example 1 in conjunction with the disclosure at column 4, line 28 that the anion may be sulfate. There is no evidence on record showing that the composition prepared according to the process of Bhattacharyya would not also exhibit the X-ray diffraction peaks as recited in applicant's claims. Applicant's argument, that Bhattacharyya fails to teach the exchange of ions with other anions is not convincing. Regarding claim 38, Bhattacharyya discloses at column 4, line 28 that the anion be carbonate. No distinction is seen between the composition of Bhattacharyya when the anion is carbonate, and that recited in applicant's claim 38 when a

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sulfate ion has been exchanged with the carbonate ion. Regarding claim 43, one of ordinary skill in the art would expect that the compositions of Bhattacharyya would be capable of undergoing the conventional technique of ion exchange.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (703) 308-0248. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (703) 308-3837. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2351.

WAL:cdc

October 14, 2003

WAYNE A. LANGE
PRIMARY EXAMINER